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MARINE ENGINEERING: IN-DEPTH UNDERSTANDING

Start Date:	17/01/2027	**End Date:**	21/01/2027
Categories:	Engineering & Maintenan	**Venues:**	Dubai
Formats:	In Person	**Instructors:**	

OVERVIEW

This program provides an in-depth exploration of marine engineering principles, covering vessel design, propulsion systems, auxiliary machinery, and operational best practices. Participants will gain a comprehensive understanding of the systems that ensure the safe and efficient operation of marine vessels.

OBJECTIVES

By the end of this course, participants will be able to: – Analyze the fundamental principles of naval architecture and ship design. – Evaluate various marine propulsion systems and their operational characteristics. – Understand the function and maintenance of critical auxiliary machinery onboard vessels. – Apply knowledge of regulatory frameworks (e.g., IMO, classification societies) to marine engineering practices. – Develop skills in troubleshooting common marine engineering issues. – Enhance understanding of energy efficiency and environmental considerations in marine operations.

COURSE OUTLINE

1- Naval Architecture and Ship Systems 2- Marine Propulsion and Power Generation 3- Auxiliary Machinery and Systems 4- Marine Operations and Maintenance 5- Regulatory Compliance and Future Trends

TARGET AUDIENCE

Marine engineers, naval architects, ship officers, technical superintendents, fleet managers, and professionals involved in the design, construction, operation, and maintenance of marine vessels.

METHODOLOGY

The program employs a blended learning approach, combining expert-led lectures, case studies of real-world marine engineering challenges, interactive simulations of ship systems, group discussions on operational scenarios, and practical problem-solving exercises based on industry standards like MARPOL and SOLAS.

CONCLUSION

Upon completion of this program, participants will possess a robust understanding of marine engineering, enabling them to contribute effectively to the safe, efficient, and compliant operation of marine assets, while also being prepared for emerging challenges in the industry.

DAILY AGENDA

Day 1: Foundations of Naval Architecture

This day focuses on the core principles of ship design, hydrostatics, stability, and the structural integrity of marine vessels, setting the stage for understanding complex systems.

Day 2: Propulsion Systems Deep Dive

We will explore the various types of marine propulsion, including diesel engines, gas turbines, and electric propulsion, examining their thermodynamics, efficiency, and maintenance requirements.

Day 3: Essential onboard systems

This day covers essential onboard systems such as boilers, pumps, HVAC, steering gear, and cargo handling equipment, detailing their operation and common failure modes.

Day 4: Operational Excellence and Maintenance

Focus shifts to practical aspects of vessel operation, including planned maintenance systems (PMS), troubleshooting techniques, and performance monitoring using tools like CMMS.

Day 5: Regulatory Landscape and Future Outlook

The final day addresses international regulations (IMO, classification societies), environmental compliance (MARPOL), and emerging technologies shaping the future of marine engineering.

For more information, please contact us:
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